

ON THE BREEDING HABITS OF SOME ARIZONA BIRDS.

'BY W. E. D. SCOTT.

FIFTH PAPER.

Aphelocoma sieberii arizonæ.

THE Arizona Jay (*Aphelocoma sieberii arizonæ*) is an abundant species and resident wherever the live-oaks are found on the San Pedro slope of Las Sierras de Santa Catalina, between the altitudes of 3000 and 7000 feet. It is generally seen in parties of from half-a-dozen to twenty, and is an eminently gregarious and sociable bird, even during the season of breeding; and I cannot recall an instance where I have met with a solitary individual. Generally rather wary in its habits, it becomes more familiar in winter, and a bone or piece of meat hung in a tree that shades my house, induced daily visits as long as the severer weather of the past year lasted. It is quite as terrestrial as the common Crow of the East, and in many of its habits remind me of that species. During the season of acorns they form a great element in its diet, and at other times seeds of grasses and some kinds of grubs and beetles are its principal food.

About the last of February, 1885, I noticed the birds mating, and on the 16th of March found a nest, apparently completed, but containing no eggs. There were at least half-a-dozen pairs of the birds in the immediate vicinity, but a close search did not reveal any other nests. The nest was built in an oak sapling about ten feet from the ground, and is composed of dry rootlets laid very loosely in concentric rings, and with little or no attempt at weaving together. There is nothing like a lining, and the walls of the structure have an average thickness of about three-quarters of an inch. The interior diameter is five inches, and the greatest interior depth an inch and three-quarters. The whole fabric recalls to mind a rather deep saucer. The nest was not built in a crotch, but where several small branches and twigs leave the large branch (an inch and a half in diameter) which forms the main support. All the other nests I have seen resemble this one so closely that this description will answer for them.

I did not visit the nest again until the 25th of the month, and was then rather surprised to find another nest, precisely similar to the first, only about a foot away from it on the same branch, further out from the main stem of the tree. The female bird was sitting on the nest first built, and remained there until I was about to put my hand upon her; no eggs had been laid.

About a hundred feet away I discovered on the same day, the 25th, two other nests, also in oak trees, and on one a female was sitting. On disturbing her I found that the nest contained two fresh eggs, so like those of the Robin in color and general appearance as to be almost indistinguishable from them. Believing at the time, as the bird sat so closely, that this might be the full set, I took these eggs, which measured $1.18 \times .88$, and $1.13 \times .86$ inches respectively. On visiting the same locality a few days later I found this nest deserted. The other nest, found the same day, was in another oak, the branches of which touched those of the tree in which the nest containing the two eggs was placed. The two nests were not ten feet apart. There was no bird on the latter nest, nor did it then or afterward contain eggs, though it was without question a new nest, and very recently completed.

On the 1st of April I again visited the two nests first mentioned, and though the old bird was sitting on the nest earliest completed, it still contained no eggs. A visit to the same spot on April 7 was rewarded by finding five fresh eggs in this nest, which are identical in appearance with those above described, and measure, in inches, as follows: $1.25 \times .83$; $1.13 \times .85$; $1.23 \times .83$; $1.14 \times .80$; $1.16 \times .84$. The other nest did not, at this time or afterward, contain eggs; though I visited it for several weeks, at intervals of five or six days.

The striking features developed by these observations are, first, the long period after the nest was built before eggs were laid (the nest being evidently complete on March 16, and having no eggs until later than April 1), though the old birds, one or the other, were sitting on the empty structure; and, second, the building of another nest in every way identical with the first, and very close to it, which was of no obvious use, for I never noticed either of the old birds sitting on it, as was so constantly their habit in the nest close by.

I am entirely at a loss for an explanation of the fact that the nest was prepared so long—nearly three weeks—before it was

used. It will be remembered that similar facts were noted in the breeding of the Gray Vireo (*Virco vicinior*). As to the circumstance of the birds sitting so constantly before laying, I think it not improbable that it was in order to keep possession of their nest, for as a number of individuals of the species composed the colony a question of ownership might easily arise. The species too, is quite as great a robber of other birds' nests as its cousin of the East, and possibly the habit of sitting so constantly, even before any eggs are laid, is to be accounted for by a strongly inherited tendency to prevent intrusion.

The building of extra nests, as in the two instances cited, I think finds parallel in the case of the Long-billed Marsh Wren, and is possibly to be accounted for by the great nervous activity of the birds; or the extra nests may afford night resting places for the male bird during the breeding season.

Peucæa ruficeps boucardi.

This species, while resident here up to the altitude of 4000 feet in winter, and to nearly 10,000 feet during the warmer months, is much more common from the last of February until the middle of October than at other times of the year. It seems to be less shy than others of the genus that I have met with, save *Peucæa carpalis*, and does not seek cover in the thick grass to the degree or in the manner so characteristic of its congeners. At most times when flushed it will fly to the nearest tree, making little attempt to conceal itself. I often see many feeding where barley or other grain has been thrown to the domestic fowls, and at such times they are quite as familiar as the Sparrow that has caused so much argument and finally been so severely condemned in the Eastern cities. I noted the birds as beginning to sing and mate as early as the middle of March, and at that time of the year they had become a very common and characteristic species of this region.

I have before me two nests. They are so essentially similar that the description of one will answer for both. The first was found on June 5, 1885, well up on a hillside, at an altitude of 4500 feet, on the bare ground, near a tussock of grass, and manifestly no effort had been made to choose a location that would offer any shelter, or serve to conceal the structure. This nest is

very bulky for so small a bird, and is so loosely and carelessly put together that it would appear that little labor had been expended in its building. It is composed of coarse, dried grasses throughout, and there is no attempt at lining with any finer material. The interior diameter is two and three-quarters inches, and the interior depth one inch and a half. The walls are about one inch thick, but in places the grasses are allowed to straggle about in so careless a manner that the walls seem at least two inches in thickness. Contained in this nest were two young just hatched and one egg, apparently fresh, probably infertile. This egg is dead white, without any spots, and is almost as much rounded at one end as at the other. It measures $.83 \times .62$ inches.

The other nest is, as I have said, almost identical in appearance with that just described, save that it is even more bulky and a trifle deeper inside, and was found about July 27, in a similar locality. It contained three partly incubated eggs, which are the same in coloration as the one before described, and which measure respectively $.80 \times .58$, $.82 \times .60$, and $.86 \times .61$ inches.

A third nest is similar, and contained the same number of eggs. It was taken late in July, and the eggs were almost fresh. The species raises three broods at this point, and it will be seen that the breeding season extends over a period of five months.

Lophophanes wolweberi.

Another resident and rather common species in the cañon, of which a description has been given in a former paper of this series, is the Bridled Titmouse (*Lophophanes wolweberi*). It is gregarious, except during the breeding season, going about in small companies. I frequently find it, especially in the fall and winter months, associated with flocks of the Plumbeous Bush-tit (*Psaltriparus plumbeus*), and a pair or more of Strickland's Woodpeckers (*Dryobates stricklandi*) are generally found with the band. I am strongly reminded of the Black-capped Titmouse (*Parus atricapillus*) by this crested cousin of his; for the Bridled Titmouse is quite as unsuspecting and as fond of the society of man.

On the two occasions that I have discovered the species breeding the nests were located in natural cavities in the live-oaks, close

to my house. The first of these was found on May 9, 1884. I took the female as she was leaving the nest, which was in a cavity, formed by decay, in an oak stump. The opening of this hole was about three and a half feet from the ground; its diameter was about three inches inside, and it was some eighteen inches deep. The entrance was a small knot-hole where a branch had been broken off, and was only large enough to admit the parent birds. The hollow was lined with cottonwood down, the fronds of some small rock-ferns, and some bits of cotton-waste. Three eggs had been laid, and by the appearance of the female two more would have completed the set. Unfortunately, in taking the eggs from the nest, two of these were broken, and I am prevented from giving measurements of more than one. All of them were pure white, with a pinkish tinge before being blown, and are unspotted. They are very much pointed at one end, and correspondingly obtuse at the other. The unbroken egg measures $.63 \times .48$ inches.

Just a year later, on May 8, 1885, I again found a pair breeding in an entirely similar location, and also very near the house. I had been aware for some days that the nest was in a certain group of oaks, for the male was constantly singing his very pleasing song, and though I could see as well as hear from the piazza, it was only by most careful watching that I was able to locate the one of the many natural holes in which the pair had made their home. The small entrance was some six feet from the ground, and the cavity was a foot deep, and two and a half inches in diameter. It was lined on the bottom and well up on the sides with a mat composed of cottonwood down, shreds of decayed grasses, some hair from a rabbit, and many fragments of cotton-waste, gathered by the birds from refuse waste that had been used to clean the machinery of a mill hard by. I cannot help calling attention again to the fact of how largely the birds that breed in the immediate vicinity of this mill have acquired the habit of utilizing this material. Four years ago very few settlers had invaded this region, and no machinery had before been brought into the district. Now the influence of man, on such a minor detail as the material used in nest-building, by a great variety of birds just about, is plainly appreciable.

The nest contained, when discovered, four young just born, and two eggs about to be hatched. These are very similar to the

egg already spoken of, being dead white in color, without any spots or markings, and measuring $.65 \times .51$, and $.67 \times .53$ inches.

I think it unlikely that a second or later brood was raised by this species, as by the third week in June I have found several broods of young associated together, escorted each by the parent birds; in this way, forming very large flocks, they roam about through the oak groves.

A LIST OF THE BIRDS OBSERVED IN VENTURA COUNTY, CALIFORNIA.

BY BARTON W. EVERMANN.

THE following paper is based upon observations made during the residence of the writer at Santa Paula, from August, 1879, to July, 1881.

Ventura County lies on the coast between the counties of Santa Barbara and Los Angeles. The general direction of the coast line of this county is northwest and southeast. The Santa Barbara Islands lie to the southwest, Santa Cruz and Ana Capa being in plain view from San Buenaventura, which is the county seat and chief town of the county.

The surface of the county is, chiefly, very mountainous, consisting of many spurs or short ranges of the Coast Mountains. Near San Buenaventura, two small rivers empty into the ocean. These are the San Buenaventura and the Santa Clara. The first comes down from the north through a narrow valley with which the cañon called Canada de Largo is joined five or six miles from the coast. The Santa Clara River comes down from the east through the Santa Clara Valley, which varies from less than a mile to two or three miles in width until within eight miles of the ocean when it suddenly widens into a low, level plain many miles in extent. Near where the valley widens is the little village of Saticoy where Dr. J. G. Cooper, who has done so much to elucidate the natural history of the West, once spent a short time collecting. Eight miles further up the valley, or sixteen miles from the coast, is the village of Santa Paula, in the vicinity of which were made most of the observations recorded in this paper. Along the river are small, isolated groves of cottonwoods and